HDTVMT0404140 User Manual

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

SURGE PROTECTION DEVICE RECOMMENDED

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lightning strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

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Introduction:

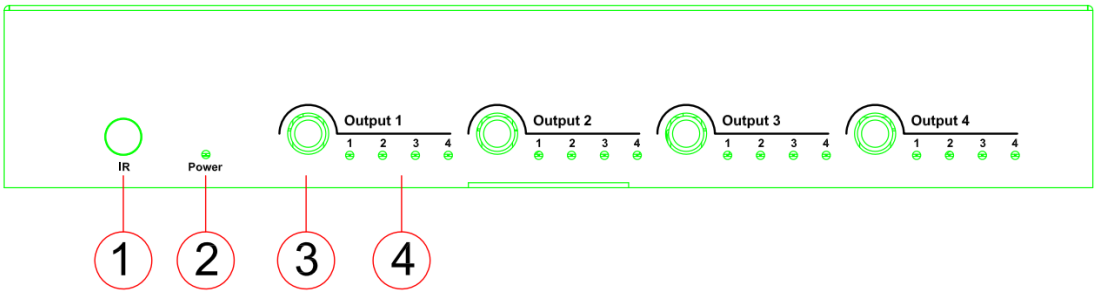
The HDTVMT0404140 4×4 Matrix with IR matrix for HDMI routes four Hi-Def sources to any four HDTV displays, supporting 1080p Full HD up to 4K plus all 3D formats, along with multichannel digital audio formats such as Dolby® True HD and DTS-HD® Master Audio™. Each source can be routed to any display using the front-panel push buttons, IR remote control,and RS-232 interface.

Features:

- Supports resolutions up to 1080p@60HZ,48-bit deep color, 4k@30HZ
- Allows any source to be displayed on multiple displays at the same time
- Allows any HDMI display to view any HDMI source at any time
- Dolby TrueHD and DTS-HD master audio pass through HDMI output
- Advanced EDID management for rapid integration of sources and displays
- Multiple switching mode, push-in button, IR remote control,and RS-232 control
- Easy installation with rack-mounting ears
- Full 3D pass- through.
- HDCP compliant

Panel Descriptions

Front Panel



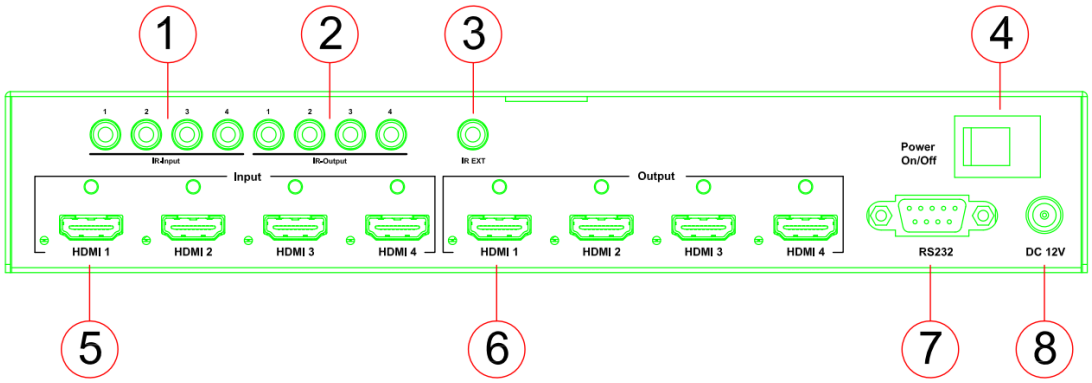
1. IR receiver window----Receive the IR from the remote control of HDTVMT0404140.

2. Power LED indicator---Indicate the status of the power for the matrix.

3. HDMI output selection button 1 to 4---Press to select the output from 1 to 4.

4. Input LED indicator---Indicate the status of the input for the matrix.

Back Panel



1. IR inputs 1 to 4 ---- 3.5mm stereo phone-jack

2. IR outputs 1 to4 ---- 3.5mm stereo phone-jack

3. IR extension receiver input ---- 3.5mm stereo phone-jack

4. Power switcher---- Press to power on/off the matrix

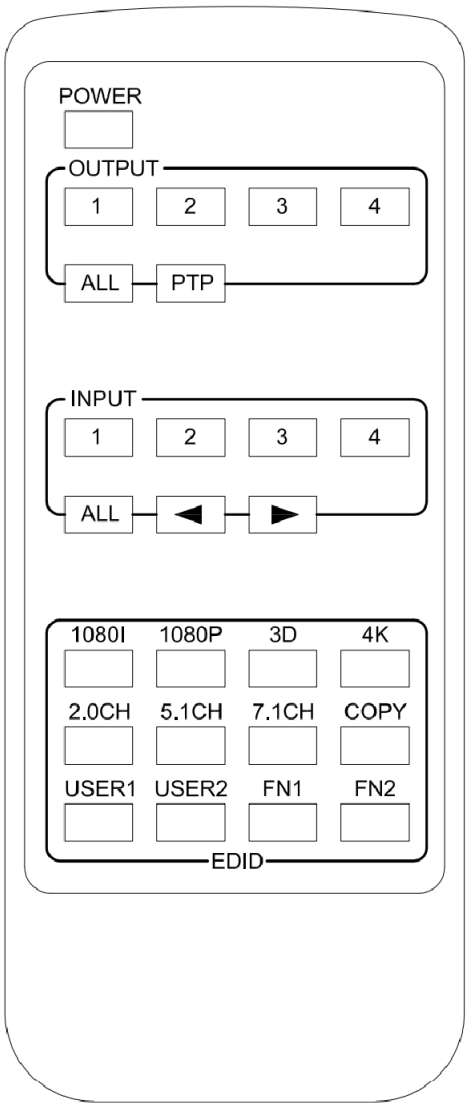
5. HDMI inputs 1 to 4----Connect HDMI sources

6. HDMI outputs 1 to 4----Output for displays, AVR etc.

7. RS232 female port----Connect to the PC using RS232 cable

8. Power port---Use included DC adaptor to power the matrix switcher.

Remote Control Description



Output and Input select

A. OUTPUT-X select INPUT-Y:

1. Press OUTPUT-X (X means 1 to 4 of outputs)→Press INPUT-Y (Y means 1 to 4 of inputs)
2. Press OUTPUT-X (X means 1 to 4 of outputs)→ press the left and right arrow buttons to select the input.

B. All outputs select INPUT-Y: Press ALL button in zone OUTPUT→Press INPUT-Y button (Y means 1 to 4 of inputs), then INPUT-Y switched to ALL OUTPUTS

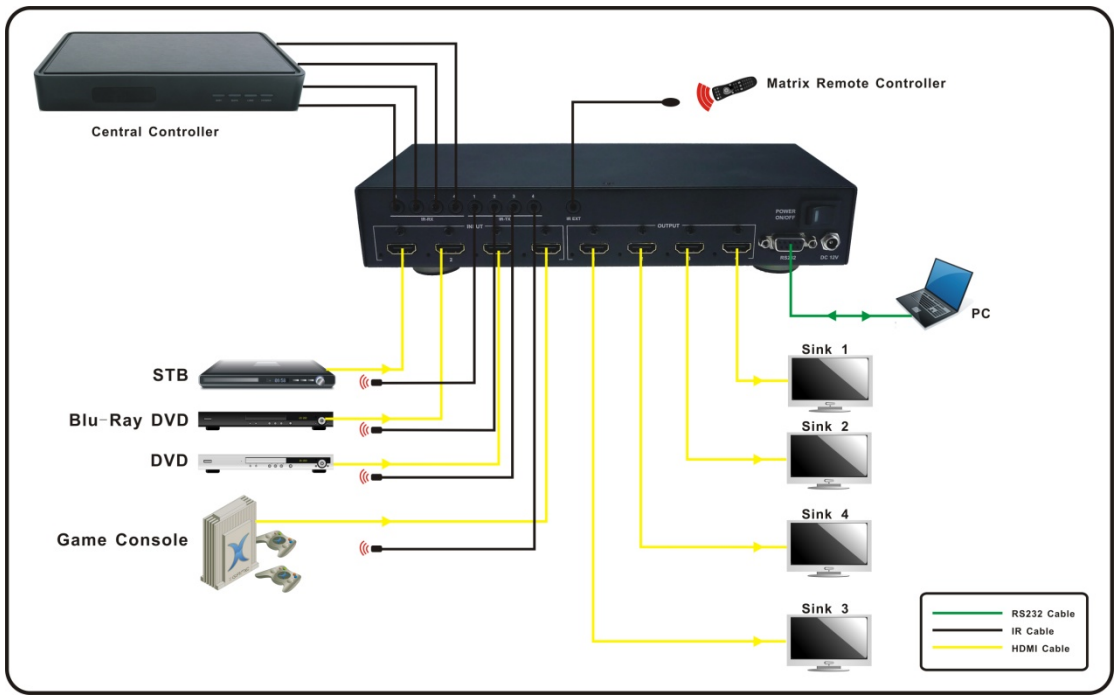
C. Mirror all inputs and outputs (Ex. Input 1 to output 1, input 2 to output 2, etc): Press PTP button in Zone OUTPUT

EDID Set Up

A. Fixed EDID to INPUT-Y/ALL
   Press 1080I/1080P/3D/4K→Press 2.0CH/5.1CH/7.1CH→INPUT-Y/ALL button in Zone INPUT
B. Copy EDID of OUTPUT-X to INPUT-Y/ALL
   Press COPY button→Press OUTPUT-X button→Press INPUT-Y/ALL button
C. User defined EDID to INPUT-Y/ALL
   Press USER1/USER2 button→Press INPUT-Y/ALL

NOTE: Pressing button sequence should be finished in 5 seconds, otherwise, operation discarded.

Application Diagram



Specifications:

Bandwidth:	2.97Gbps per color
Video Input Connectors:	4x HDMI Type A, 19-pin, female, locking
Video Output Connectors:	4x HDMI Type A, 19-pin, female, locking
RS-232 serial port:	DB-9, female
IR Input ports:	5x 3.5mm stereo jack
IR Output ports:	4x 3.5mm stereo jack
Rack-Mountable:	Rack ears included
Dimensions (W x H x D):	256mm x 114mm x 43mm , without feet
Shipping Weight:	1.0kg
Operating Temperature:	32°F to 104°F (0°C to 40°C)
Storage Temperature :	-4°F to 140°F (-20°C to 60°C)
Power Supply:	12V/2A DC

Package Contents:

1. 1x HDTVMT0404140
2. 1x 12V DC power supply
3. 1x Remote control
4. 4x IR Transmitter,
5. 5x IR Receiver.
6. 1x mounting kit.
7. 1x CD for control software & user manual.

RS-232 Pin Assignment

HDTVMT0404140			Remote Control Console	
PIN	Assignment		PIN	Assignment
1	NC		1	NC
2	Tx		2	Rx
3	Rx		3	Tx
4	NC		4	NC
5	GND		5	GND
6	NC		6	NC
7	NC		7	NC
8	NC		8	NC
9	NC		9	NC

Baud Rate: 57600 bps

Data Bit: 8-bit

Parity: None

Stop Bit: 1-bit

Flow Control: None

DIP for EDID Setting

[DIP]=0000: HDMI 1080p@60Hz, Audio 2CH PCM
[DIP]=0001: HDMI 1080p@60Hz, Audio 5.1CH PCM/DTS/DOLBY
[DIP]=0010: HDMI 1080p@60Hz, Audio 7.1CH PCM/DTS/DOLBY/HD
[DIP]=0011: HDMI 1080i@60Hz, Audio 2CH PCM
[DIP]=0100: HDMI 1080i@60Hz, Audio 5.1CH PCM/DTS/DOLBY
[DIP]=0101: HDMI 1080i@60Hz, Audio 7.1CH PCM/DTS/DOLBY/HD
[DIP]=0110: HDMI 1080p@60Hz/3D, Audio 2CH PCM
[DIP]=0111: HDMI 1080p@60Hz/3D, Audio 5.1CH PCM/DTS/DOLBY
[DIP]=1000: HDMI 1080p@60Hz/3D, Audio 7.1CH PCM/DTS/DOLBY/HD
[DIP]=1001: HDMI 4K2K, Audio 2CH PCM
[DIP]=1010: HDMI 4K2K, Audio 5.1CH PCM/DTS/DOLBY
[DIP]=1011: HDMI 4K2K, Audio 7.1CH PCM/DTS/DOLBY/HD
[DIP]=1100: DVI 1280x1024@60Hz, Audio None
[DIP]=1101: DVI 1920x1080@60Hz, Audio None
[DIP]=1110: DVI 1920x1200@60Hz, Audio None

GUI Control

PC System: Microsoft Windows Operation System

Installation

4x4 HDMI Matrix controller is a green software. You just need to copy “4x4 HDMI Matrix Controller vx.x.exe” to the PC which is used to control the Matrix by RS232 COM or TCP to complete installation.

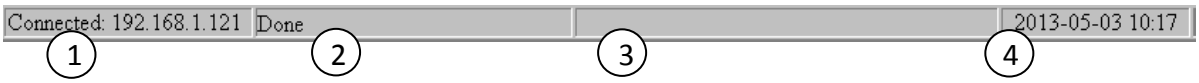
Preparation

1. Connect PC and Matrix by RS232 cable
2. Power up Matrix (It will take about 5 seconds to be ready with “Di” beep sound)
3. Double click “4x4 HDMI Matrix Controller vx.x.exe” icon to run it

How to control Matrix

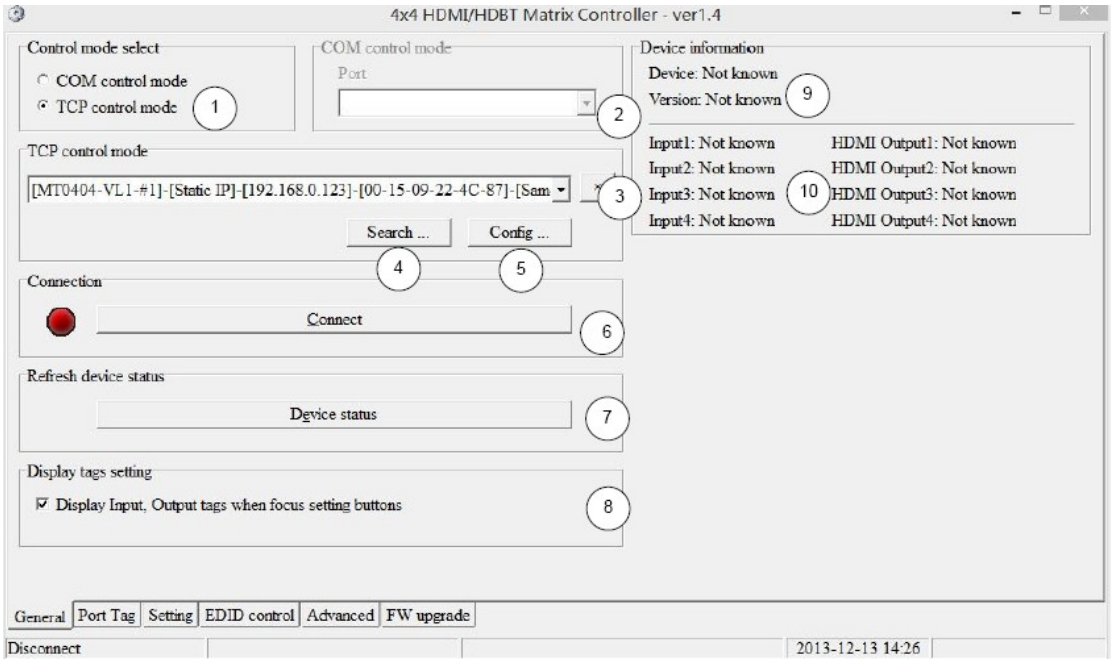
Common information

Click to select tab page



① COM port or TCP connect status
② Control command process status
③ Prompt message display area
④ Date and Time display

“General” page



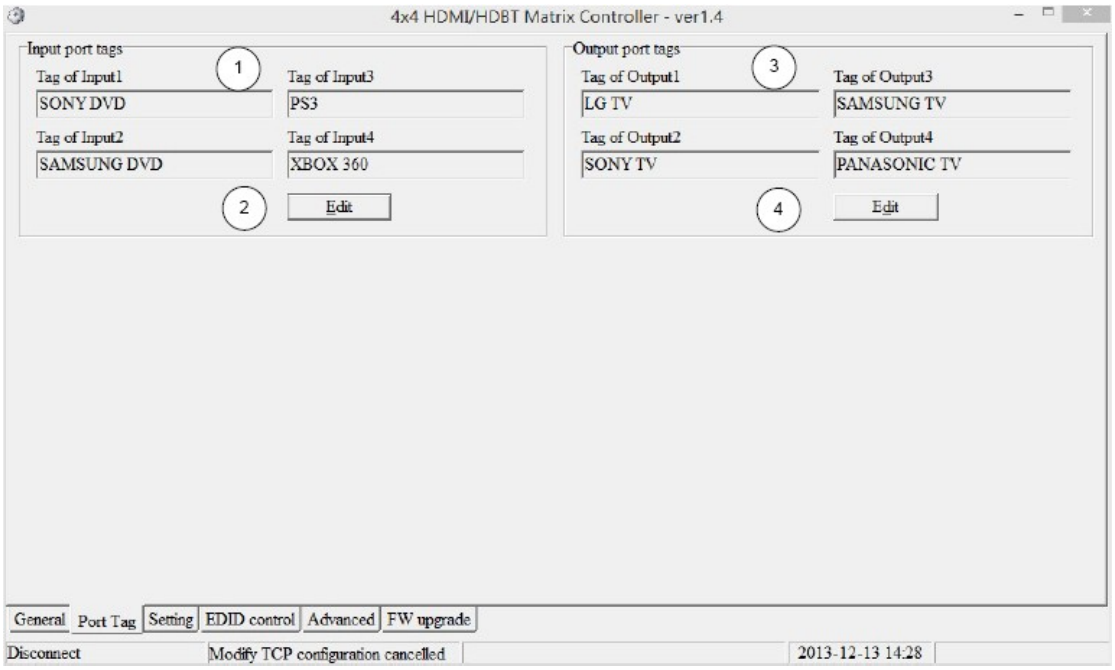
① Select control mode: RS232 COM mode (Auto COM ports detected)
② List detected COM ports
③ List all Matrix devices after search operation
④ Click to search all Matrix devices that connected in same subnet
⑤ Click to configuration the selected Matrix's TCP control configurations if available.
⑥ Click to connect or disconnect PC and Matrix (Connection will be established automatically before control commands sending)

⑦ Click to refresh device status: include device information displayed in ⑨ area and Input/output port connection status in ⑩ area.

NOTE: Tab pages cannot be changed during control command is processing.

⑧ To enable or disable Input/output tags displaying when setting buttons on "Setting" page focused
⑨ Device information display area
⑩ Input/output port connection status

"Port Tag" page



① Input port tags

② Click to edit Input port tags

③ Output port tags

④ Click to edit Output port tags

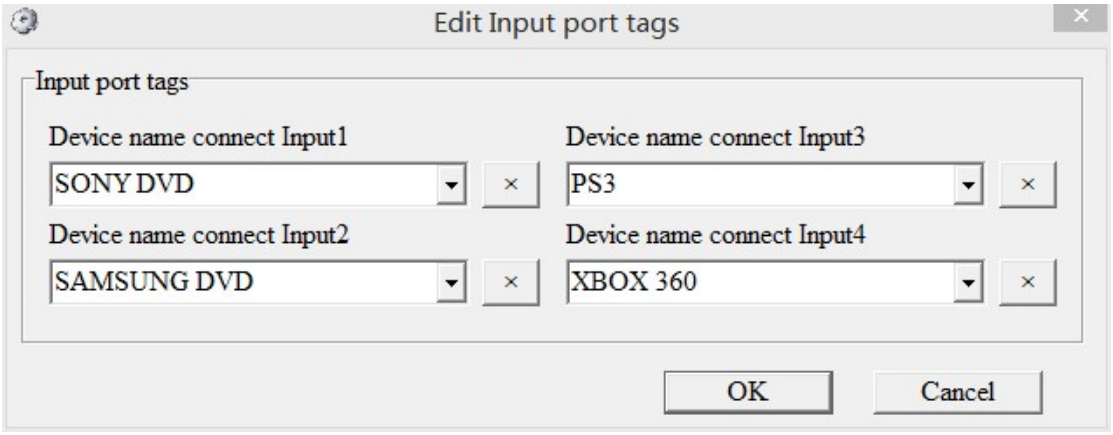
NOTE: Edit boxes are read only, click “Edit” button to pop up window to edit the tags.

One set of Input/output port tags can be set for Matrix device when COM control mode selected.

Input/output port tags can be set for respective Matrix device according to device’s MAC address.

Edit Input port tags

After action of ②, edit form will pop-up as below:

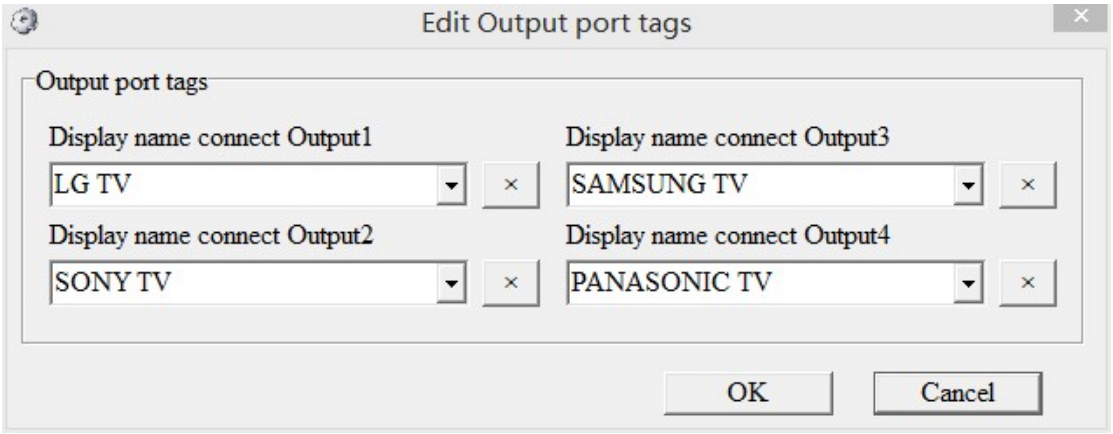


Define tags for respective Input port, then devices connect the Input ports can be easily remembered.

Click buttons with "×" caption to delete tag which is no use any more, if tag is still used by any other Input port, delete action will be discarded.

Edit Output port tags

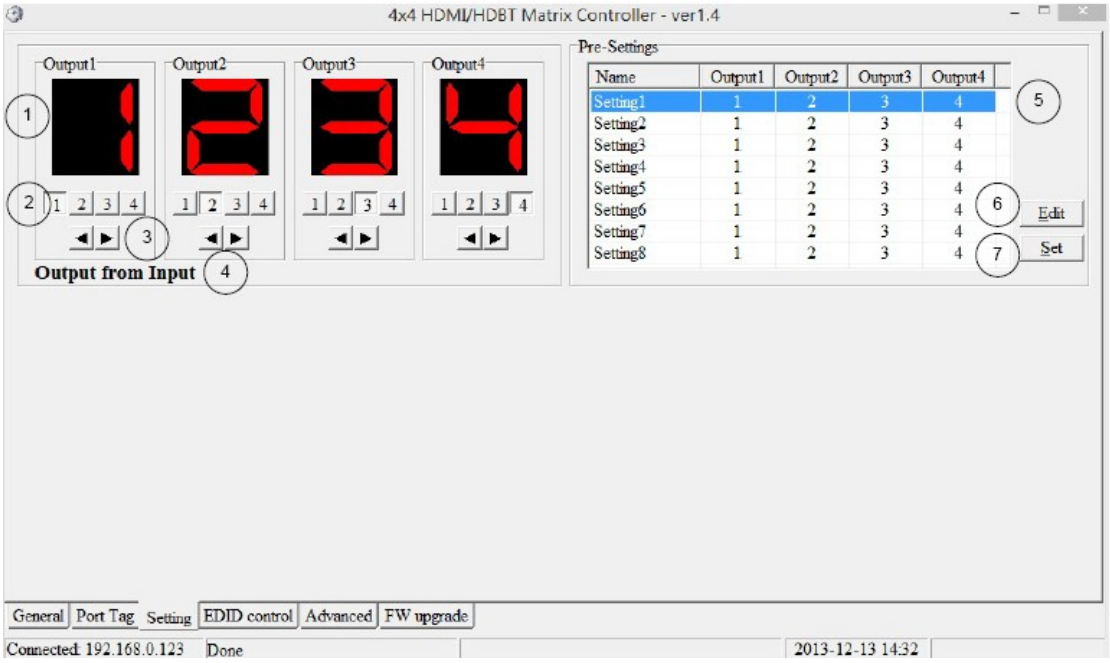
After action of ④, edit form will pop-up as below:



Define tags for respective Output port, then displays connect the Output ports can be easily remembered.

Click buttons with "×" caption to delete tag which is no use any more, if tag is still used by any other Output port, delete action will be discarded.

“Setting” page

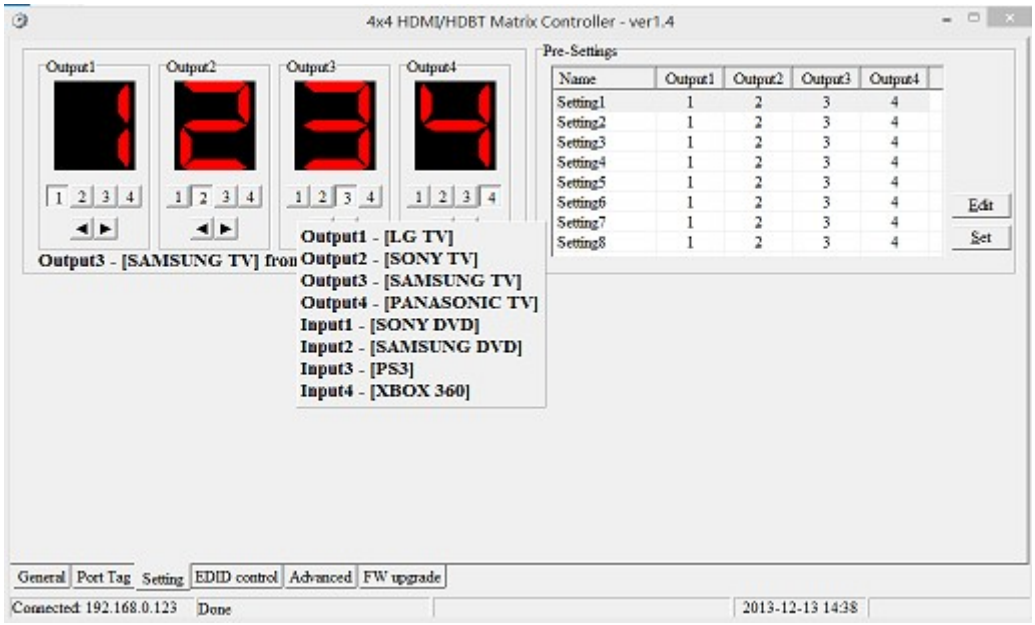


① LED which displays Input number for respective Output port
② Click to select Input port for respective Output port
③ Click to select previous or next Input port for respective Output port
④ Display Output from Input with tag information when mouse moves over ② buttons
⑤ Pre-Setting items: Default is Port to Port
⑥ Click to edit selected pre-setting item
⑦ Set selected pre-setting item to Matrix

NOTE: When Change to this “Setting” page, software will try to refresh source selection status of Output port.

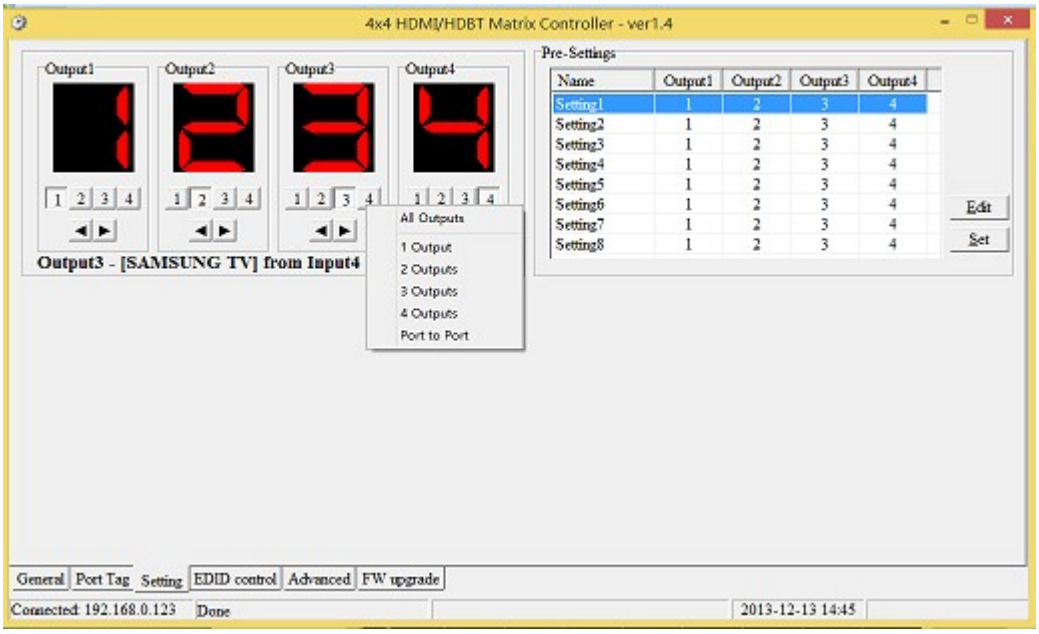
Pop-up tag messages

When “Display Input, Output tags when focus setting buttons” checkbox on “General” page is checked and Input/output port tag has been defined, tag messages will pop up like as:



Pop-up Menu

When mouse moves over ② setting buttons, and click mouse right button, menu will pop up like as:



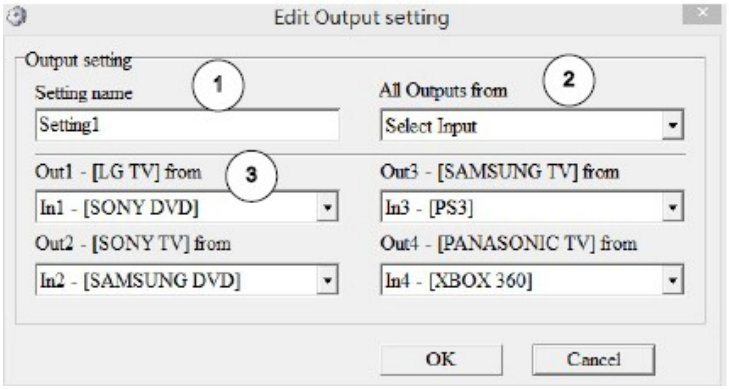
All Outputs: All Outputs from same Input

“1 Output” to “4 Outputs”: Set current Output (where mouse right clicked) and the next x-1 (x range is from 1 to 4, set total x Outputs at the same time) Output(s) from same Input

Port to Port: Output1 from Input1, Output2 from Input2, Output3 from Input3, etc.

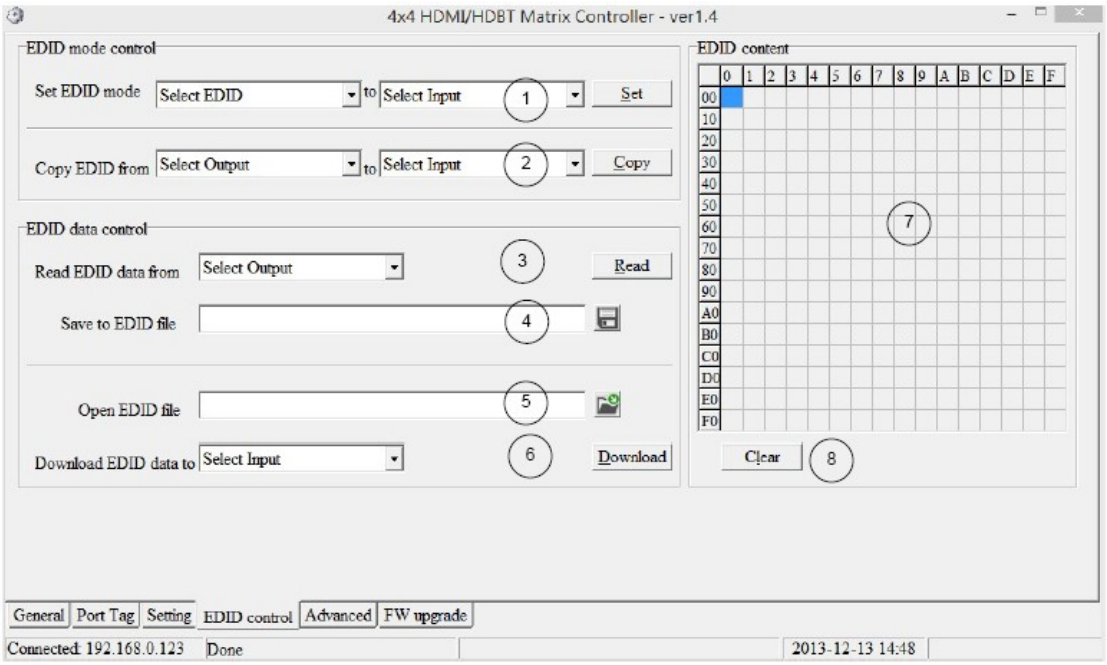
Edit selected pre-setting item

After action of ⑥, edit form will pop-up as below:



① Pre-Setting name
② Set all Output ports from same Input
③ Select Input for respective Output

“EDID control” page



① Set EDID mode for selected Input port or All Input ports, click “Set” button to complete action.

NOTE: When set User1/User2 EDID mode, should Download EDID content to User1 Memory/User2 Memory first. User1/User2 default EDID content is 1080p, Stereo Audio 2.0.

② Copy EDID from Output port to selected Input port or All Input ports, click “Copy” button to complete action.

③ Read EDID content from Output port and display in grid, click “Read” button to complete action.

④ Save EDID content which displayed in grid to binary file (file extension is “.bin”)

⑤ Open EDID binary file and display in grid

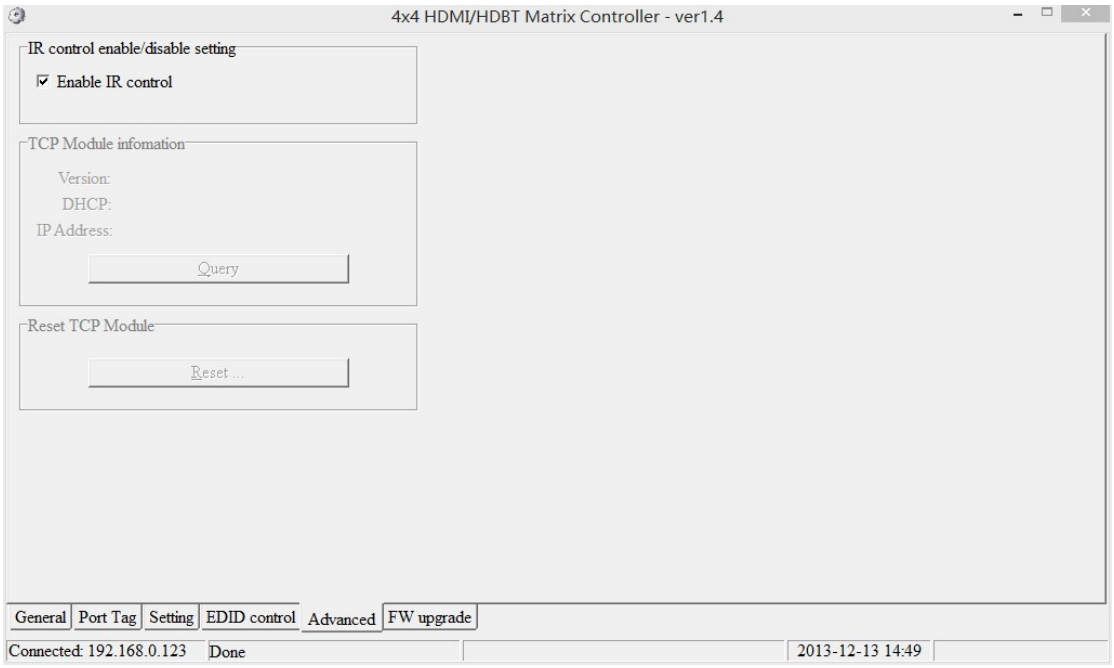
⑥ Download EDID content which displayed in grid to selected Input port or All Input ports, click “Download” button to complete action. When User1 Memory/User2 Memory selected, download EDID content to respective memory then User1/User2 EDID mode can be set.

⑦ EDID content displaying grid

NOTE: EDID content displayed in grid is read only.

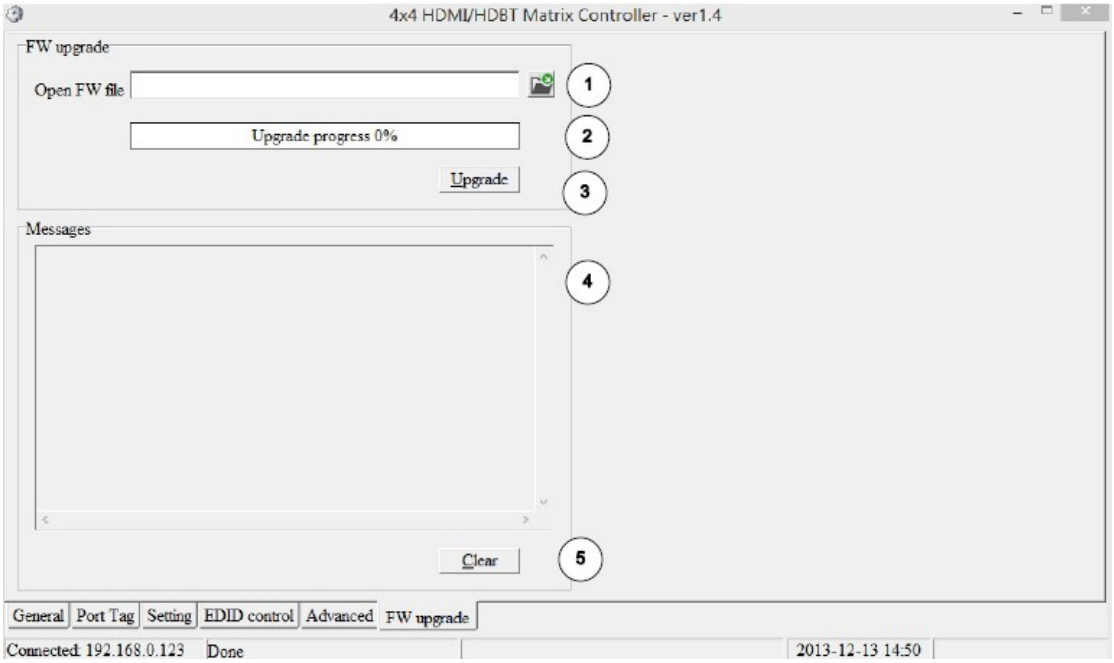
⑧ Click to clear EDID content displayed in grid

“IR Configuration” page



To enable or disable IR control function. When box checked, IR control function enabled, otherwise, IR control function disabled. This setting is not memorized. IR control function is always enabled after power up.

“FW upgrade” page



① Click to open firmware file (file extension is ".fw").
② Firmware upgrade progress
③ Click the button to upgrade firmware.

NOTE: If failure occurs during upgrading firmware process, the following steps SHOULD be done sequentially to establish next upgrading procedure:

1. Power down the Matrix
2. Close the 4x4 HDMI Matrix Controller
3. Re-power up the Matrix, then wait for 10 seconds to ensure the Matrix is ready
4. Run 4x4 HDMI Matrix Controller, open firmware file and upgrade again

④ Firmware upgrading messages display
⑤ Click to clear the messages displayed in the memo box.

Maintenance

Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner or benzene to clean this unit.

Warranty Policy

HDTV Supply products are warranted against defects in material and workmanship for two years from the date of shipment. During the warranty period, HDTV Supply will, at its option, repair or

replace products that prove to be defective. Repairs are warranted for the remainder of the original warranty or a 90 day extended warranty, whichever is longer.

For equipment under warranty, the owner is responsible for freight to HDTV Supply and all related customs, taxes, tariffs, insurance, etc. HDTV Supply is responsible for the freight charges only for return of the equipment from the factory to the owner. HDTV Supply will return the equipment by the same method (i.e., Air, Express, Surface) as the equipment was sent to HDTV Supply.

All equipment returned for warranty repair must have a valid RMA number issued prior to return and be marked clearly on the return packaging. HDTV Supply strongly recommends all equipment be returned in its original packaging.

HDTV Supply's obligations under this warranty are limited to repair or replacement of failed parts, and the return shipment to the buyer of the repaired or replaced parts.

Limitations of Warranty

The warranty does not apply to any part of a product that has been installed, altered, repaired, or misused in any way that, in the opinion of HDTV Supply, would affect the reliability or detracts from the performance of any part of the product, or is damaged as the result of use in a way or with equipment that had not been previously approved by HDTV Supply.

The warranty does not apply to any product or parts thereof where the serial number or the serial number of any of its parts has been altered, defaced, or removed.

The warranty does not cover damage or loss incurred in transportation of the product.

The warranty does not cover replacement or repair necessitated by loss or damage from any cause beyond the control of HDTV Supply, such as lightning or other natural and weather related events or wartime environments.

The warranty does not cover any labor involved in the removal and or reinstallation of warranted equipment or parts on site, or any labor required to diagnose the necessity for repair or replacement.

The warranty excludes any responsibility by HDTV Supply for incidental or consequential damages arising from the use of the equipment or products, or for any inability to use them either separate from or in combination with any other equipment or products.

A fixed charge established for each product will be imposed for all equipment returned for warranty repair where Tonlyware cannot identify the cause of the reported failure.

Exclusive Remedies

HDTV Supply warranty, as stated is in lieu of all other warranties, expressed, implied, or statutory, including those of merchantability and fitness for a particular purpose. The buyer shall pass on to any purchaser, lessee, or other user of HDTV Supplys' products, the aforementioned warranty, and shall indemnify and hold harmless HDTV Supply from any claims or liability of such purchaser, lessee, or user based upon allegations that the buyer, its agents, or employees have made additional warranties or representations as to product preference or use.

The remedies provided herein are the buyer’s sole and exclusive remedies. HDTV Supply shall not be liable for any direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any other legal theory.

RMA Policy

When returning product to HDTV Supply for any reason, the customer should fill out the official RMA form to obtain a RMA number. Without the permission or approval, HDTV Supply will not be responsible for any return.

This can be initiated by emailing or calling your related sales.

All requests are processed within 48 hours.

Standard Replacement

For customers that agree to return defective product to HDTV Supply first, a Standard Replacement option is available.

An RMA number must first be issued by sales. This RMA number will need to be referenced on the outside of the return shipment.

Upon receipt of the defective product, HDTV Supply will, at its discretion, either repair or replace the product and ship it out in the most expeditious manner possible. Subject to availability, the replacement product will be shipped on the business day following receipt of the defective product.

In the event the product returned to HDTV Supply has been discontinued (i.e. the product is no longer being manufactured by HDTV Supply but is still under warranty), HDTV Supply will, at its discretion, either repair or replace with recertified product.

Once you have obtained an RMA number

After obtaining an RMA number from HDTV Supply, you must send the product - freight prepaid - to Tonlyware Technology Co., Ltd. The HDTV Supply RMA number must be prominently displayed on the outside of your package. If you send your product to HDTV Supply without the RMA number prominently displayed on the outside of the package, it will be returned to you unopened.

Please use a shipping company that can demonstrate proof of delivery. HDTV Supply does not accept responsibility for any lost shipments unless proof of delivery to HDTV Supply is provided.

Please note:

Product shipped to HDTV Supply must be properly packaged to prevent loss or damage in transit.

Shipping your RMA to HDTV Supply using regular mailing envelopes is not acceptable, as they do not protect the product from damage during shipping.

HDTV Supply will not repair or replace a module that is shipped in such a way that the product is not properly protected.

HDTV Supply will not accept any product that has been damaged as a result of accident, abuse, misuse, natural or personal disaster, or any unauthorized disassemble, repair or modification.